# EE 491 WEEKLY REPORT 4

September 27th – October 3rd

Power system reliability in MISO for high wind/solar levels

Group 23

Client: Midcontinent Independent System Operator

Team Members:

Zaran Claes

Shannon Foley

Matt Huebsch

Shelby Pickering

Ian Rostkowski

David Ticknor

WEEKLY SUMMARY

This week in Senior design we received our required data from MISO to begin calculations. This included: load profiles, renewable profiles, and bus mapping for generators. Additionally, MISO provided us with a set of tasks that need to be done with the data. As a group we began to look through the data and discuss the next steps.

ACCOMPLISHMENTS FOR THE WEEK

| Name | Accomplishments | Hrs this week | Total |
|---|---|---|---|
| **Zaran Claes** | -Met with team for planning<br>-Found capacity factors for renewable generation sites | 4 | 13 |
| **David Ticknor** | -Began to dive into provided data, understood the structure and layout.<br><br>- Brought up questions about data provided from MISO | 3 | 13 |
| **Shannon Foley** | - Began Design Document and began designing an overall testing plan for the semester.<br>-Created agenda for weekly meeting<br>-Combined needed documents to get PLEXOS software for the team | 5 | 15 |
| **Ian Rostkowski** | -Began to work with data and familiarize self with calculations that will be using the data.<br><br>-prepared a Gantt chart and took responsibility of maintaining a high-level schedule for the group<br><br>-met for weekly team meeting and updated faculty + company clients about the Gantt chart and the groups plans for scheduling int he future | 4 | 14 |
| **Shelby Pickering** | -Met with team to discuss a timeline for MISO | 2 | 11 |

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|---|---|---|---|
| | -Met with MISO and Dr. McCalley as a team to go over the timeline and structure of weekly meetings<br><br>-Began looking through data that we receive from MISO | | |
| **Matt Huebsch** | -Wrote minutes for meeting 4<br><br>-Met with team to talk about our “Plan Document” | 3 | 14 |

PENDING ISSUES

- The team is awaiting PLEXOS software, the main software needed to simulate power models for our project.

INDIVIDUAL CONTRIBUTIONS FOR NEXT WEEK

Zaran Claes- Help with analyzing the data that we currently have, creating graphs, finding peak load/generation dates. Assuming we get PLEXOS, I'd like to start in on that with using it and teaching it to other members.

David Ticknor - I will really need to dive into the technicalities of the data, and start to process it. I will be looking to figure out the capacity factor and capacity credit calculations we can do, and how to do it easily. Hopefully PLEXOs will be delivered to us, as I have done some reading about using it, but want to actually try it out.

Shannon Foley- During next week, We will begin the design document for the class. Hopefully, this will make our team talk and think about the overall vision of this project and how we planned to test things. I believe that a vision of the project is important to its completion.

Ian Rostkowski - Begin conceiving options for the calculations and criteria that we will need to have set going forward into this project (calculating capacity credit, retirement criteria, and siting criteria). Will also be modifying the Gantt chart as needed throughout the project's lifetime.

Shelby Pickering – I will be gone most of next week, so I will plan on keeping in contact with the team while I am gone, as well as reading the meeting notes and looking at the data calculations the team starts to run.

Matt Huebsch- I need to write the minutes for meeting five.